Leesville Reservoir
2002 Management Report

Leesville Reservoir is a 3,400-acre impoundment located near Altavista Virginia. This reservoir straddles the Pittsylvania and Bedford County borders. Leesville Reservoir is owned by American Electric Power and is managed primarily for hydroelectric power generation and to pump back stored water to Smith Mountain Lake for additional hydroelectric power generation. There is very little development along the shoreline at this time but residential development is increasing. Facilities are limited primarily to boat launching facilities and a marina.

This reservoir experiences daily water level fluctuations of 1 to 10 feet per day. Dramatic water fluctuations are a result of power generation and pump back storage for Smith Mountain Lake. The headwaters of Leesville Reservoir sustain cool water temperatures throughout the year due to discharges from Smith Mountain Lake.

Largemouth bass are one of the most sought after species by anglers at Philpott Reservoir. Smallmouth and roanoke bass are also present at Leesville Reservoir but contribute very little to the black bass fishery. According to VDGIF electrofishing samples, largemouth bass densities vary depending on lake area. The upper reaches of the reservoir experiences dramatic water level and temperature fluctuations that reduce bass habitat and spawning success. The best largemouth bass population is from Leesville dam to Howell Creek. Most fish are between 9 and 14 inches but there is a fair number of fish up 21 inches.

Since reproduction for most reservoir species such as bass and catfish is poor in comparison to other reservoirs, Leesville Reservoir is stocked with additional predators. The stocking of striped bass and walleye is a way to utilize available forage and provide additional angling opportunities.

The current state record striped bass was caught from Leesville Reservoir in 2000. This reservoir does support a good striped bass population but capitalizing on this fishery can be a challenge. Striped bass occasionally utilize the cooler water in the upper reaches of the reservoir during the summer months for thermal refuge. However, forage is very limited in this area of the reservoir and most striped bass move downstream to utilize additional forage when water temperatures are cooler during the late fall through early summer.

Leesville Reservoir supports good numbers of walleye including a few fish up to 7 pounds. The walleye population has been more stable in recent years from changes in the stocking program. The best concentrations of walleye are between Cliff Creek and Leesville Dam. Walleye fishing can be challenging due to rapidly rising and falling water levels. There is no or very limited natural reproduction of walleye so the population is sustained with an annual stocking of approximately 85,000 fingerling walleye.

White bass at Leesville Reservoir have historically produced good to poor fisheries. This white bass populations reproductive success is highly variable from year to year. Good production of young fish can create a fishery for a number of subsequent years. If there is multiple poor year classes of white bass then the fishery will suffer the following years. Good spawning success is related to high flows in the spring from the

Pigg River. Since there has been low flows for the past several years, the white bass population at Leesville Reservoir is likely to be low at the current time.

Leesville Reservoir can be a pleasant change from most busy reservoirs especially if you are looking for little competition with other anglers and boaters. Keep in mind, frequent water level fluctuations can make patterning fish more difficult. Boaters also need to watch for floating debris that is a routine occurrence on this reservoir.

Leesville Reservoir Key Findings 2001

- Leesville Reservoir had a comprehensive electrofishing survey conducted from the Leesville dam to the Smith Mountain Dam for the first time in 2001.
- There was only one fish (bluegill) collected during sampling near the Smith Mountain Dam. This sample was not included with other sample sites for analysis.
- Catch rates for largemouth bass (9 fish/hr) were very poor at sites upstream of Howell Creek.
- The largemouth bass population in the lower portion of the lake (below Howell Creek) was good with catch rates of 67 fish/hr. These catch rates were higher than Smith Mountain Lake (60 fish/hr) and Philpott Reservoir (51 fish/hr).
- Stock indices for largemouth bass were lower than other district reservoirs, PSD = 47 and RSDp = 20.
- Water temperatures, flows, and level fluctuations do not appear to be conducive for largemouth bass in the upper reaches of the reservoir.
- There was only 4 smallmouth bass collected from all reservoir sites combined.
- Sampling conducted upstream of Howell Creek was dominated by bluegill and redbreast sunfish. However, catch rates for these species dramatically increased in the lower portion of the reservoir.
- Walleye were only collected in the lower portion of the reservoir and the CPUE was 7.2 fish/hr for this area of the reservoir.
- Yellow perch were the fourth most abundant species collected. There was also a total of 4 roanoke bass collected.
- Future sampling should be conducted below Howell Creek with sites similar to 2001 for more consistent trend analysis.
- Shad electrofishing sampling was conducted for the first time on 8-28-01. Only gizzard shad were collected. YOY gizzard shad were observed in good numbers but were too small to collect with electrofishing gear.
- Future shad electrofishing sampling should be conducted later in the summer or early fall to allow for recruitment of YOY shad to the sampling gear. Cold water discharges from Smith Mountain Lake may be delaying shad spawning at Leesville Reservoir.